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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/568,191

02/13/2006

Tadashi Tomikawa

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ALEXANDRIA, VA 22320-4850

EXAMINER

DECKER, PHILLIP

ART UNIT

PAPER NUMBER

3749

NOTIFICATION DATE

DELIVERY MODE

09/15/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/568,191	Applicant(s) TOMIKAWA ET AL.	
	Examiner Phillip E. Decker	Art Unit 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 18-29 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 18-29 is/are rejected.
- 8) ☒ Claim(s) 24 is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 13 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. This action is in response to Applicants' amendment filed 06/15/2011, which is entered.

Drawings

2. Applicant's arguments and amendments to the specification, see p. 6 lines 7 – 9, filed 06/15/2011, with respect to drawing objections have been fully considered and are persuasive. The objection to the drawings has been withdrawn.

Specification

3. Applicant's arguments and amendments to the specification, see p. 6 lines 10 – 15, filed 06/15/2011, with respect to objections to the specification have been fully considered and are persuasive. The objection to the specification has been withdrawn.

Claim Objections

4. Claim 24 is objected to because of the following informalities: the word "enable" in line 6 of the claim should be -- enables --. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 18 - 29 rejected under 35 U.S.C. 103(a) as being unpatentable over Aisin AW Col. Ltd. (JP 2003-112532 English translation) (hereinafter "Aisin") in view of Onizuka et al (US 2001/0026430 A1) (hereinafter "Onizuka"). These two references, when considered together, teach all of the elements recited in claims 18 – 29 of this application.

8. Regarding claim 18, Aisin discloses an on-vehicle circuit unit (ECU 1) that includes a circuit board (11) having a power circuit (microcomputer which controls electrical machinery and apparatus, para. [0025]) and a heat radiating member (case 8) having an inner surface (8c) to which the circuit board is fixed in a manner that enables heat conduction (para. [0030]) and an outer surface (8d) that is as a heat radiating surface (para. [0027]); and a case (8), the case incorporating the on-vehicle circuit unit (1) and other circuit components (para. [0025]) while exposing the outer surface of the heat radiating member to an outside of the case (Drawing 2), wherein the case has a mounting portion (8a) which is fixed to the engine room (4, Drawing 1, via boss 6 and

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bolt 9) to make the outer surface of the heat radiating member face an inner surface of the engine room (Drawings 1 - 2) with a clearance (12) between the heat radiating member and the inner surface (5) of the engine room. Aisin does not disclose that the case is other than the heat radiating member.

9. Onizuka teaches a case (60, Figs. 4A and 6) other than the heat radiating member (56), the case incorporating the on- vehicle circuit unit and other circuit components (14) while exposing the outer surface of the heat radiating member (bottom of 56) to an outside of the case. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Aisin by adding that the case is other than the heat radiating member as taught by Onizuka in order to make it easier to manufacture and assemble the different components.

10. Regarding claim 19, Aisin further discloses that the mounting portion (8a) is fixed to the engine room (4) to make the outer surface of the heat radiating member parallel with the inner surface of the engine room (5, shown parallel in Drawing 2).

11. Regarding claim 20, Aisin further discloses that the mounting portion (8a) is fixed to the engine room (4, Drawing 1, via boss 6 and bolt 9) to make a clearance (12) but does not disclose that the clearance between the outer surface of the heat radiating member and the inner surface of the engine room falls in a range of 3mm and 20mm. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to make the clearance between the outer surface of the heat radiating member and the inner surface of the engine room fall in a range of 3mm and 20mm as routine optimization of prior art conditions. MPEP 2144.05, II.

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12. Regarding claim 21, Aisin further discloses that the heat radiating member (8) has a mounting part (8b) that is fixed (via boss 7 and bolt 10) to a first portion of the engine room (Drawing 2) to make contact with the first portion and the mounting portion (8a) of the case is fixed to a second portion of the engine room (spaced apart from the mounting part 8a as shown in Drawing 2).

13. Regarding claim 22, Aisin further discloses that the mounting part (8b) of the radiating member (8) is fixed to a bottom wall (5) of the engine room (4) while the mounting portion (8a) of the case (8) is fixed to a bottom wall (5) of the engine room (4). Aisin shows all elements of the claim except that the mounting part is fixed to a side wall and not a bottom wall of the engine room. However, it would have been an obvious matter of design choice to modify the apparatus of Aisin to have a mounting part is fixed to a side wall since the present application does not show that the fixing location of the mounting part solves a particular problem or is for any specific purpose and because it appears that the apparatus would function equally well in either configuration.

14. Regarding claim 23, Aisin further discloses that the on-vehicle circuit unit (1) is fixed to the engine room (4) in a manner so that the mounting part (8b) faces upward (see Drawings 1(a) and 2).

15. Regarding claim 24, Aisin discloses a wall of the engine room (4, Drawing 1(a)), the wall having an inner surface (5, Drawing 2); an on-vehicle circuit unit (1) that includes a circuit board (11) having a power circuit (microcomputer which controls electrical machinery and apparatus, para. [0025]) and a heat radiating member (case 8)

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having an inner surface (8c) to which the circuit board is fixed in a manner that enables heat conduction (para. [0030]) and an outer surface (8d) that is a heat radiating surface (para. [0027]); and a case (8), the case incorporating the on-vehicle circuit unit (1) and other circuit components (para. [0025]) while exposing the outer surface of the heat radiating member to an outside of the case (Drawing 2), wherein the case has a mounting portion (8a) which is to be fixed to the engine room (4, Drawing 1, via boss 6 and bolt 9) to make the outer surface of the heat radiating member face the inner surface of the wall of the engine room (Drawings 1 - 2) with a clearance (12) between the heat radiating member and the inner surface (5) of the wall of the engine room. Aisin does not disclose that the case is other than the heat radiating member.

16. Onizuka teaches a case (60, Figs. 4A and 6) other than the heat radiating member (56), the case incorporating the on- vehicle circuit unit and other circuit components (14) while exposing the outer surface of the heat radiating member (bottom of 56) to an outside of the case. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Aisin by adding that the case is other than the heat radiating member as taught by Onizuka in order to make it easier to manufacture and assemble the different components.

17. Regarding claim 25, Aisin further discloses that the mounting portion (8a) is fixed to the engine room (4) to make the outer surface of the heat radiating member parallel with the inner surface of the wall of the engine room (5, shown parallel in Drawing 2).

18. Regarding claim 26, Aisin further discloses that the mounting portion (8a) is fixed to the engine room (4, Drawing 1, via boss 6 and bolt 9) to make a clearance (12) but

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does not disclose that the clearance between the outer surface of the heat radiating member and the inner surface of the engine room falls in a range of 3mm and 20mm. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to make the clearance between the outer surface of the heat radiating member and the inner surface of the engine room fall in a range of 3mm and 20mm as routine optimization of prior art conditions. MPEP 2144.05, II.

19. Regarding claim 27, Aisin further discloses that the heat radiating member (8) has a mounting part (8b) that is fixed (via boss 7 and bolt 10) to a first portion of the engine room (Drawing 2) to make contact with the first portion and the mounting portion (8a) of the case is fixed to a second portion of the engine room (spaced apart from the mounting part 8a as shown in Drawing 2).

20. Regarding claim 28, Aisin further discloses that the mounting part (8b) of the radiating member (8) is fixed to a bottom wall (5) of the engine room (4) while the mounting portion (8a) of the case (8) is fixed to a bottom wall (5) of the of the engine room (4). Aisin shows all elements of the claim except that the mounting part is fixed to a side wall and not a bottom wall of the engine room. However, it would have been an obvious matter of design choice to modify the apparatus of Aisin to have a mounting part is fixed to a side wall since the present application does not show that the fixing location of the mounting part solves a particular problem or is for any specific purpose and because it appears that the apparatus would function equally well in either configuration.

21. Regarding claim 29, Aisin further discloses that the on-vehicle circuit unit (1) is fixed to the engine room (4) in a manner so that the mounting part (8b) faces upward (see Drawings 1(a) and 2).

Response to Arguments

22. Applicant's arguments with respect to claims 1 – 17 and 18 – 29 have been carefully considered but are moot in view of the new ground(s) of rejection.

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip E. Decker whose telephone number is (571)270-3088. The examiner can normally be reached on M - F, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve McAllister can be reached on (571)272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Phillip E. Decker/
Examiner, Art Unit 3749

/STEVEN B. MCALLISTER/
Supervisory Patent Examiner, Art Unit 3749